3

SOME NOTES

TO BE USED AS THE BASIS

FOR A

GENERAL DISCUSSION OF THE FINANCES

OF

R.E.A. FINANCED ELECTRIC DISTRIBUTION COOPERATIVES

IN WISCONSIN

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MEETING DATES

January 3
RICHLAND CENTER

January 15
BARRON

January 16
EAU CLAIRE

January 17
WAUTOMA

SPONSORED BY THE

WISCONSIN REA COOPERATIVE MANAGERS

AND THE

MANAGEMENT DIVISION
RURAL ELECTRIFICATION ADMINISTRATION

Here are some of the highlights we would like to discuss today.

1. A CORPORATE BALANCE SHEET.

   (a) What does it mean?
   (b) How is it formulated?
   (c) How to interpret a balance sheet.
   (d) Net worth.
   (e) Effect of depreciation on a balance sheet.

2. THE DIFFERENCE BETWEEN A CORPORATION FINANCED THROUGH THE SALE OF STOCK AND ONE FINANCED ENTIRELY ON BORROWED CAPITAL.

   (a) Recognizing the basic difference.
   (b) The necessity for acquiring "replacement capital".
   (c) The demands of an amortized loan.
   (d) Prepayments on loan and cash reserves.

3. AN "OPERATING REPORT" OR RECORD OF BUSINESS DONE DURING A GIVEN PERIOD.

   (a) How does it tie in with a balance sheet?
   (b) How does it tie in with a budget?

4. A BUDGET.

   (a) Is a budget necessary?
   (b) What items should be considered in a budget?
   (c) How can we arrive at budget amounts?
   (d) What items in a budget can be controlled by management?
   (e) Do we have enough collective experience to warrant working toward an "ideal" budget?
   (f) Long term budgets or financial forecasts.
   (g) How do Co-op members fare under the budget?

To comprehend the problems of corporate financing and to be able to direct a sound fiscal policy it is necessary that we understand the basic principles of such a program. In order that we can have a basis for our guidance in such matters, accountants have developed certain "yardsticks" by which we can measure financial progress. The most important of these yardsticks are a "balance sheet", which shows the financial condition at any given time, and a "profit and loss" statement (R. E. A. operating report), which shows whether revenues are greater or less than expenditures for a given period of operation.

We need also to get a true understanding of a corporation as compared to a natural person doing business for himself, or a partnership of two or more persons. To help us too, we should recognize the basic difference between the financial picture of a corporation which is financed through the sale of common stock and one financed entirely on borrowed capital, especially one financed by an amortized loan.

The dictionary defines a corporation as "any group of persons - treated by law as an individual or unity, having rights or liabilities or both, distinct from those of the persons composing it", or "treated by law as having legal individuality or entity other than that of a natural person". A better understanding of a corporate balance sheet is possible if we keep in mind that the money put in by the persons forming the corporation and the profits left in the corporation by the persons entitled to receive such profits are liabilities of the corporation although they may be considered as assets of the individual owners of the corporation.

BALANCE SHEET

A balance sheet is a statement of the assets and liabilities of a business on any given date. It is a "yardstick" by which the financial progress (up or down) of a business may be measured. Where periodic balance sheets are made (the Co-op prepares a balance sheet at the close of each month) comparison should be made between the current statement and the statements issued previously in order to judge the progress.

A Typical Balance Sheet will show the following or similar items:

Assets	Liabilities	
Cash on Hand	Accounts Payable	
Accounts Receivable	Stock or Memberships Issued	
Physical Plant	Funded Debt	
Inventory	Other Liabilities	
Bonds, Securities, etc.	(Surplus)	= Net
Other Assets	(Undistributed Margins)	Worth
Total	Total	

Balance each other

The actual financial progress is indicated by the "Net Worth". This amount is the portion of the business which is "owned" by the business (members or stockholders, partners, or individual). It is actually owned by the business - but is PAYABLE TO THE OWNERS - hence it is shown as a "liability" on the balance sheet. "Stock" or "memberships issued" is also shown as a "liability" since the money actually belongs to the owners of the stock or memberships - not the business.

The following statements are illustrative of how the progress of a hypothetical business can be traced from balance sheets:

At Date of Organization of the Business

Assets		Liabilities	
Cash in Bank	$10,000.00	Stock Issued	$10,000.00
Total Assets	$10,000.00	Total Liabilities	$10,000.00

Later but PRIOR TO ANY EARNINGS

Assets		Liabilities	
Cash in Bank	$2,000.00	Stock Issued	$10,000.00
Inventory	5,000.00		
Physical Plant	3,000.00		
Total Assets	$10,000.00	Total Liabilities	$10,000.00

AFTER A PERIOD OF EARNINGS

Assets		Liabilities	
Cash in Bank	$ 4,000.00	Stock Issued	$10,000.00
Accounts Rec.	1,000.00	Accts. Payable	500.00
Inventory	4,000.00	Net Worth	1,250.00
Plant (Less Dep.)	2,750.00		
Total Assets	$11,750.00	Total Liabilities	$11,750.00

The net worth will grow or shrink - in proportion to the net earnings or losses at the time of the next balance sheet statement. "Net Worth" is the statement of what the business has earned during its operation - less any dividends paid.

NOTE: A comparison of the total FOOTINGS of balance sheet statements DOES NOT NECESSARILY reflect the financial progress of a business.

A CO-OP BALANCE SHEET

ASSETS AND OTHER DEBITS		LIABILITIES AND OTHER CREDITS	
Electric plant	1,991,068.45	Membership fees	67,820.00
Const. Work in Progress	1,138,919.74	REA Const. Obligation	2,545,800.57
Utility Plant Total	3,129,988.19	Total Long Term Debt	2,545,800.57
Less Reserve for Dep.	448,353.48	Accts. Payable	49,917.21
Dep. Cost of Ut. Plant	2,681,634.71	Consumers' Deposits	260.00
Gen. Fund - Cash	47,036.12	Accrued Taxes	1,524.20
REA Const. Fund	107,555.28	Accrued Interest	2,780.31
Restricted Funds	19,410.00	Emp. Income Tax Withheld	605.75
Investments	100.00	Accrued Insurance	46.66
Temp. Cash Investment	89,745.00	Other Current & Acc. Liab.	2,142.57
Accts. Receivable	57,606.17	Total Current H Acc. Liab.	57,276.70
Less Reserve for Unc. Accts.	32.59	Other Deferred Credits	7,479.90
Materials & Supplies	68,184.25	Patronage Capital Credits	226,463.72
Prepayments	3,139.52	Oper. Margin (Current Yr.)	57,121.99
Total Current H Acc. Assets	392,743.75	Oper. Margin (Prev. Yrs.)	110,802.28
Unamortized Loan Exp.	7,328.95	Non-operating Margin	8,942.25
		Total Margins & Other Equities	403,330.24
TOTAL ASSETS	3,081,707.41	TOTAL LIABILITIES	3,081,707.41

The bookkeeping system of an REA financed Co-op is rather complicated. There are great separate ledger accounts which have to be taken into consideration in making up a balance sheet. The bookkeeper must keep about 160 separate ledger accounts; 49 showing income and expense and 111 balance sheet accounts. The following examples show the ledger accounts necessary to get the balance sheet totals for "Electric Plant" and the "Long Term Debt" or "REA Construction Obligation".

ELECTRIC PLANT

CLASSIFIED ELEC. PLANT IN SERVICE	
Total Intangible Plant	5,170.52
Production & Transmission	929.73
Line Transformers	338,150.44
Services	65,872.80
Meters	90,021.66
Other Distribution Plant	1,449,128.51
Total Distribution Plant	1,943,173.41
Land & Structures	18,931.99
Office Furn. & Equipment	17,988.86
Transportation Equip.	22,790.17
Other Equipment	12,702.86
Tools & Work Equipment	4,943.98
Total General Plant	77,357.86
Contr. in Aid of Const.	35,563.07
TOTAL CLASSIFIED ELEC. PLANT	1,991,068.45

CONSTRUCTION WORK IN PROGRESS	
Cont. Const. in Progress	176,106.94
F. A. Const. in Progress	95,069.94
Mat. to Contractor	400,132.38
Unc. Elec. Plant in Service	467,611.18
Total Const. Work in Progress	1,138,919.74

DEPRECIATION RESERVE	
Distribution plant	427,914.08
General Plant	20,439.40
Total Dep. Reserve	448,353.48
Total Reserves, Depr.	448,353.48

REA LOAN FUND TRANSACTIONS

ALLOCATIONS, ADVANCES & REA OBLIGATIONS	Construction	Installation	Total
Total Allocations	3,667,000.00	15,000.00	3,682,000.00
Total Allocations Under Loan Cont.	3,667,000.00	15,000.00	3,682,000.00
Total Allocation Under Notes	3,448,345.00	15,000.00	3,463,345.00
Total REA Advances	2,865,009.21	12,522.60	2,877,531.81
Loan Funds Unadvanced Notes	583,335.79	2,477.40	585,813.19
Interest Accrued - Deferred	24,048.59		
Gross Obligation to REA	2,889,057.80	12,522.60	2,901,580.40
Payments Applied Against Prin.	252,845.95	12,522.60	265,368.55
Advance Payments (Cushion of Cr.)	90,411.28		90,411.28
Net Obligation to REA	2,545,800.57		2,545,800.57

The Co-op Balance Sheet on the previous page can be condensed as follows. It is easier to understand and lends itself to effective use in monthly reports to the Board members.

CONDENSED BALANCE SHEET

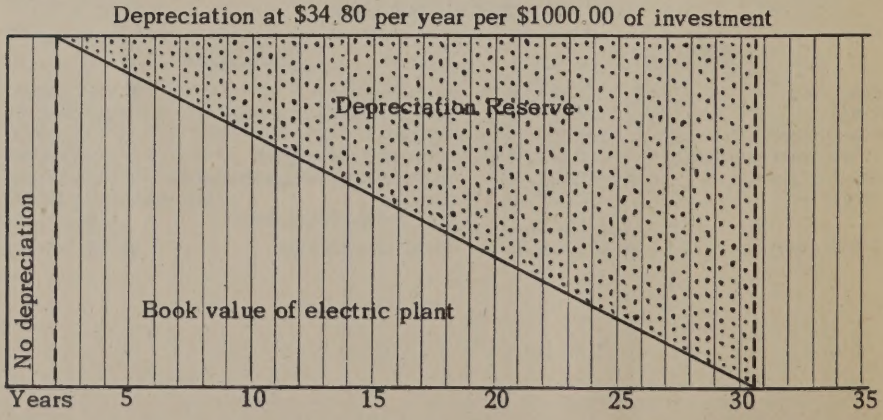
ASSETS		LIABILITIES	
Gen. Cash	$ 47,036.12	Memberships	$ 67,820.00
Bonds	19,410.00	Net obligation to REA	2,545,800.57
Const. cash	107,555.28	Other	7,479.90
Other current assets	218,742.35	Current liabilities	57,276.70
Utility plant	2,681,634.71	Deferred patronage credits	(226,463.72
Other	7,328.95	Surplus (Net Worth	(110,802.28
		Net Income (this year)	(57,121.99
Total assets	$3,081,707.41	Total liabilities	$3,081,707.41

THE EFFECT OF DEPRECIATION ON A BALANCE SHEET

A corporate accounting system requires that certain reserves be set up for the depreciation or obsolescence of the physical equipment of the corporation. REA has specified the rate of depreciation for various classes of physical property. By far the largest part of the loans to distribution Co-ops is invested in distribution or transmission lines and equipment. The rate of depreciation on such equipment is set at 3.48% per year. As a result of this rate all of the investment in distribution or transmission lines will be depreciated in 28 2/3 years from the date depreciation is started. In other words, each section of line will be fully depreciated 28 2/3 years after it is put in use.

As depreciation is charged off the value of the "electric plant", as shown by the balance sheet, will gradually diminish until at the end of the depreciation period, the "electric plant" of the cooperative will have shrunk to nothing. (This statement will have to be modified somewhat if additions to plant are made from to time). However, the loan with which the electric plant was built will not normally be fully repaid until 35 years after the original date of the loan.

The following chart shows the relationship between the "book value" of the "electric plant", the "depreciation reserve", and the life of the loan:



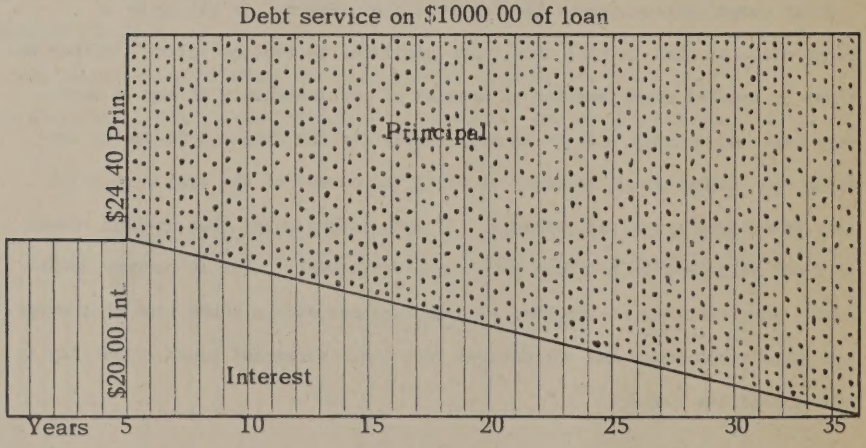
Please note that the depreciation reserve eventually equals the original cost of the electric plant and that during the last 4 1/3 years of the loan there is no plant value on the "asset" side of the balance sheet to offset the "obligation to REA" which is still on the "liability" side of the balance sheet.

The only safe way to bridge this difference in timing and to keep the "assets" of the cooperative from becoming smaller than the "liabilities" is to conserve the depreciation reserve in the form of cash, liquid investments or prepayments on the loan. A cooperative cannot be sure of making all of its principal payments out of margins. Margins are subject to too many variables, such as income taxes, changes of policy, insufficient retail rates, insufficient revenue due to lowered consumption because of adverse economic trends or emergency increases in operating costs. Payment of patronage refunds in cash could well impair the long cash position of a Co-op. Even the investment of local funds in additions to "plant" may be a questionable procedure, especially if any of the depreciation reserve is needed to make principal payments during the later years of the loan.

Under normal circumstances the "depreciation reserve" is set up by a corporation so that it will have funds available to replace "plant", either because of natural deterioration or because of obsolescence. It may be necessary (and undoubtedly will be in many cases) for REA financed Co-ops to consider the "depreciation reserve" as being the source of the cash with which they make their principal payments. If such is the case, then another source of funds will have to be found for "plant replacement" when it becomes necessary. Most electric Co-ops have been in business such a short time that eventual plant replacement has not entered into their financial plans. That day is just around the corner.

A corporation which gets all of its capital through the sale of stock, or which issues bonds and refunds them when they become due, does not have to make regular and increasingly larger "payments on principal" like the REA financed cooperatives. REA Co-ops must "replace" their entire capital during the life of their amortized loan, which is 35 years, in most cases. This means that there must be cash available every three months with which we meet obligations to REA. Since REA requires no payments on principal during the first five years of the loan, most co-ops have been able to meet the loan payments with ease. After principal payments begin, it is necessary to have $44.40 available every year for each $1000.00 of the loan. It is also necessary to have an additional amount available if the interest has accumulated for the first five years of the loan.

The following chart shows how the $44.40 is divided between principal and interest over the life of the loan:



REVENUE AND EXPENSE STATEMENT

OPERATING REVENUE	Last Year	This Year	This Mo.
Electric Energy Revenues	363,278.42	467,055.20	46,943.75
Consumers' Forfeited Discounts & Penalties	2,189.20	2,102.05	254.15
Miscellaneous Electric Revenues	213.08	166.83	13.00
TOTAL OPERATING REVENUE	365,680.70	469,324.08	47,210.90
COST OF ELECTRIC SERVICE			
Cost of Purchased Power	169,209.19	213,099.84	21,394.22
Distribution Expenses - Operations	22,286.82	25,092.56	2,936.92
Distribution Expenses - Maintenance	13,086.28	22,156.45	3,599.86
Rents	41.00	42.31	
Consumers' Accounting & Collecting	6,199.62	8,437.48	859.42
Uncollectible Consumers' Accounts		40.00	
General Office Salaries & Expenses	14,899.27	18,191.67	2,015.41
Special Services	500.00	500.00	50.00
Insurance, Injuries, Damages	1,907.80	2,732.28	238.75
Employees Welfare Expenses & Insurance	2,926.10	4,481.45	442.47
Miscellaneous General Expenses	8,009.26	9,318.63	867.67
Maintenance of General Property & Rents	635.00	753.79	73.50
TOTAL OPERATING EXPENSES	239,700.34	304,846.46	32,478.22
Depreciation of Electric Plant	51,968.11	64,918.85	6,919.92
Depreciation of General Plant	1,650.00	995.25	113.98
TOTAL DEPRECIATION EXPENSE	53,618.11	65,914.10	7,033.90
Property Taxes	208.90	548.16	62.59
Social Security Taxes	1,675.88	2,257.61	205.00
TOTAL TAX EXPENSE	1,884.78	2,805.77	267.59
Interest on Long Term Debt	31,527.12	38,635.76	4,321.44
TOTAL COST OF ELECTRIC SERVICE	326,730.35	412,202.09	44,101.15
Patronage Capital Adjusted (OPR. MARGIN)	38,950.35	57,121.99	3,109.75
NON-OPERATING MARGINS			
Interest Revenues (Net)	975.00	975.30	
Revenues from Merchandising Sales	909.98	622.28	123.75
Less Merchandising Revenue Deductions	909.98	- 624.48	- 125.03
Other Non-operating Revenues	425.00	425.00	42.50
Less Other Non-operating Revenues	11.10	- 402.00	- 17.71
TOTAL NON-OPERATING MARGINS	1,388.90	996.10	23.51
PATRONAGE CAPITAL AND MARGINS (TOTAL)	40,339.25	58,118.09	3,133.26

The following "pie" charts were made up from the operating reports for the year 1949 of some selected REA Co-ops. They illustrate the wide variation there is in the financial affairs of corporations in the same business and operating under reasonably comparable conditions.

It is well to keep in mind that there are only two segments of Co-op revenue from which we can get cash to pay off loan and replace plant; (a) THE CO-OP MARGINS AND (b) THE DEPRECIATION RESERVE.

The story of the expenses of an electric distribution cooperative is told month by month and year by year through the "operating report" which must be submitted monthly to REA. A continuous and never ending study of these reports by Board members and managers is necessary if there is to be effective planning and control of the Co-op finances. Most of us here today are just "cutting our eye teeth" in the matter of corporate finances. The members have entrusted the welfare of the cooperative to the Board of Directors and the Board in turn has given management authority to the manager. Along with the authority the Board should see that the manager has the time necessary for the study of management problems. The manager, in turn, should keep the Board thoroughly informed as to the overall operations of the cooperative. One of the highly important reports to the Board will be an easily understandable statement of the finances of the Co-op.

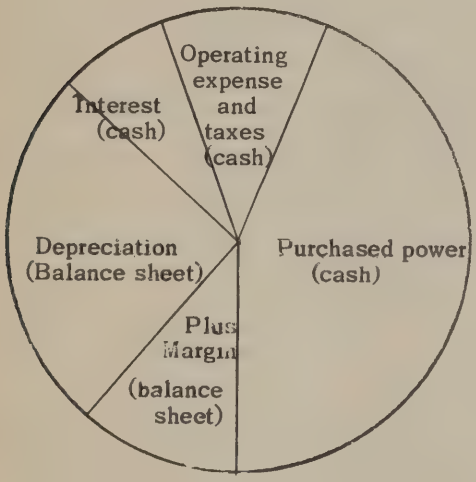
Let us examine the expense statement of a cooperative; that portion of the Operating Report which tells what revenue was received and what the expense of doing business amounted to. There are certain items of expense that can be controlled by management. These items deal primarily with the local operating expenses such as payroll, maintenance, rent, light, heat , Board expense, taxes, etc. There are other items over which management has no control. The following charts are designed to show at a quick glance just how revenue and expenses balance each other. Study of such charts by each cooperative should readily indicate what steps need to be considered in shaping the general fiscal policy.

AN OPERATING REPORT OR A RECORD OF BUSINESS
DURING A GIVEN PERIOD

There are four general types of expense which are recognized as legitimate for our accounting purposes. Expenses may be "cash" expenses or "balance sheet" expenses.

1. Purchased (or generated) Power. (Cash expense)
2. General Expenses of Operating the Business. (Cash expense)
3. Interest on Long Term Debt. (Usually cash, sometimes balance sheet)
4. Depreciation of Plant and Equipment. (Balance sheet)

When you subtract the above expenses for a given period from the REVENUE EARNED during the same period, you will find either a PLUS or a MINUS margin. Illustrated as follows: The whole "pie" represents income - the segments represent the various expenses and a plus margin.

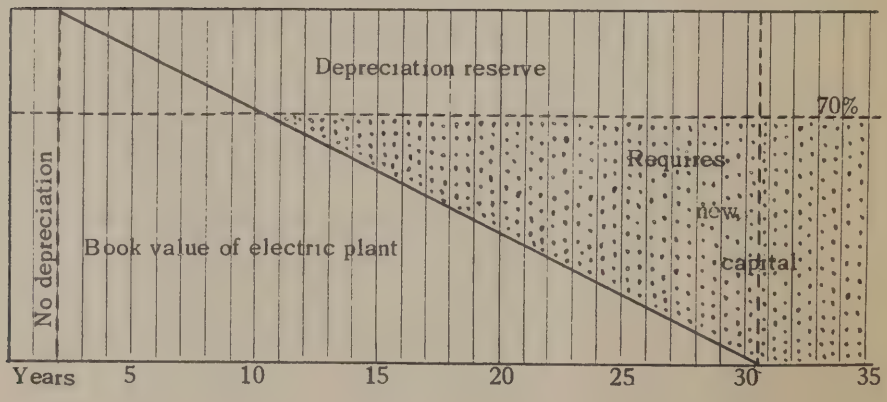


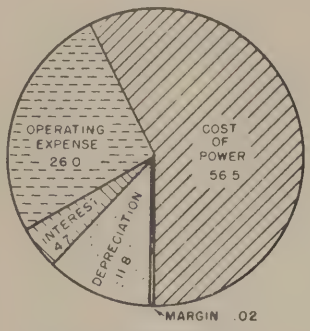
NOTE - Repayment of Principal on a Loan is NOT AN EXPENSE.

REA financed Co-ops will need cash for replacement of plant. Just how much and how soon has not yet been determined. However, REA recommends that the Co-op set up a plant replacement reserve in cash equal to 1.08% of the total cost of the "electric plant" each year. This would be equivalent to approximately $350.00 for each $1000.00 of loan accumulated over the life of the loan.

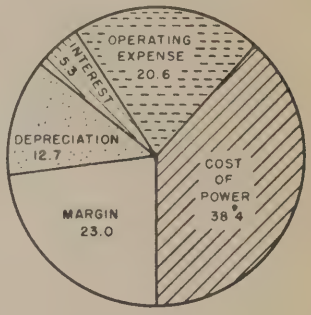
Authorities differ somewhat in the amount of plant replacement necessary to keep an electric distribution system in good operating order - good enough so that the patrons will be satisfied with their electric service and that the revenue will not suffer. Some Commissions arbitrarily say 70% of original condition. Other state regulatory bodies say 65%. Some authorities go as low as 50% but all recognize that the electric plant must be kept up, and THAT IT CANNOT BE KEPT UP THROUGH "MAINTENANCE" ALONE.

The following chart gives a rough idea of the amount of replacement capital required and approximately when such expenditures might be expected:

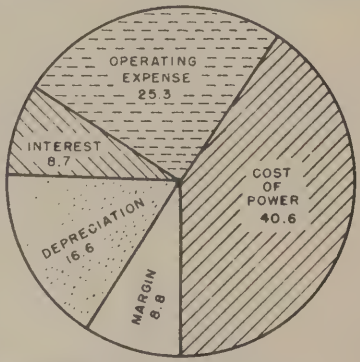




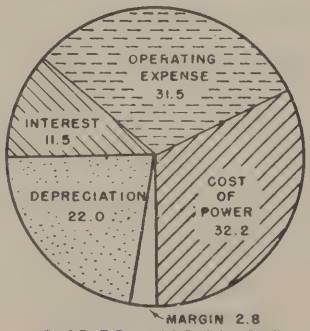
$293.00 INCOME PER $1000.00 OF LOAN



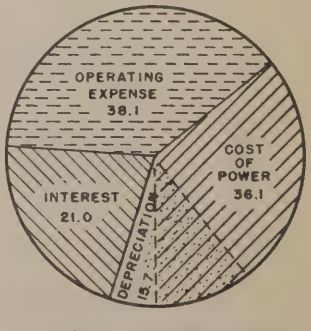
$283.00 INCOME PER $1000.00 OF LOAN



$195.00 INCOME PER $1000.00 OF LOAN
AVERAGE - 9 COOPS - 1949



$142.50 INCOME PER $1000.00 OF LOAN



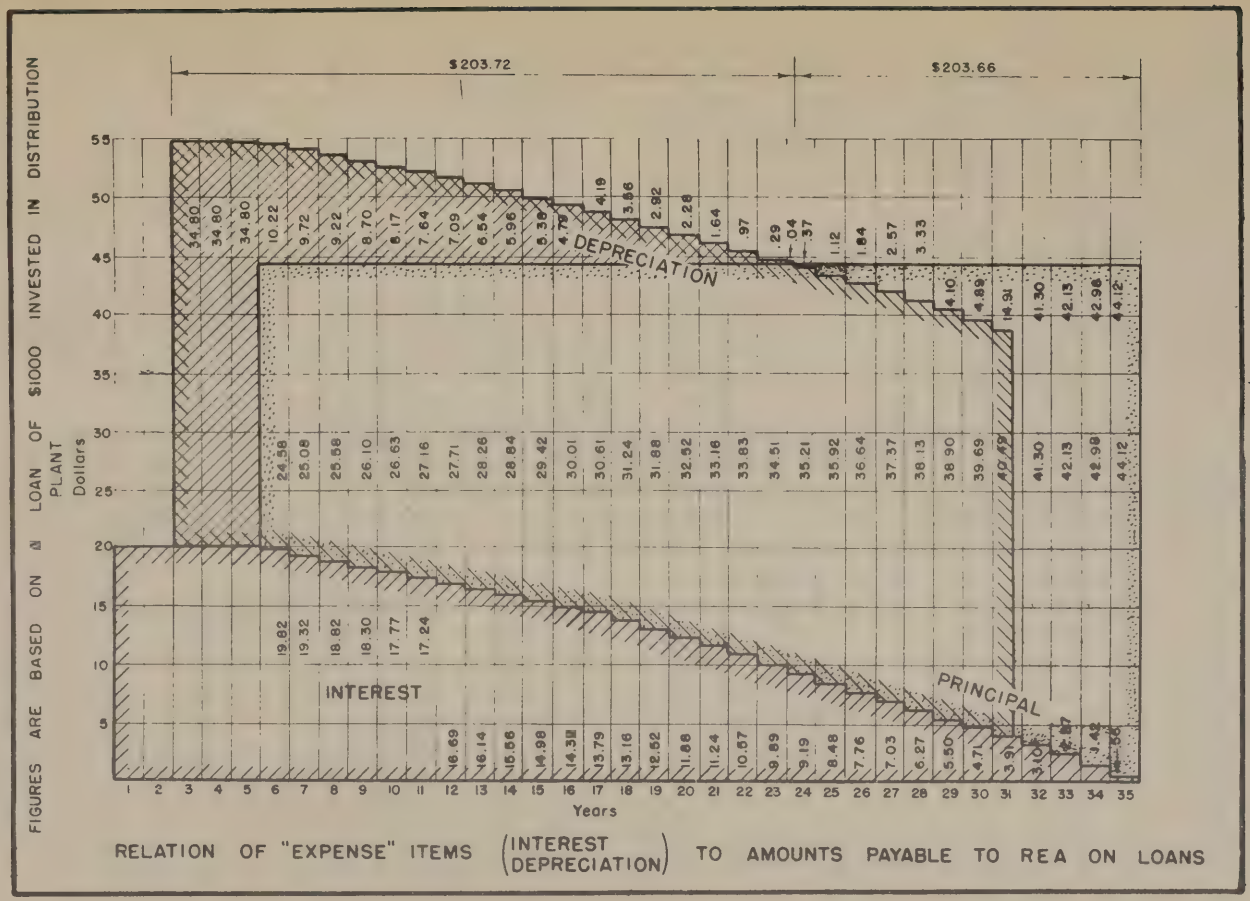
$77.20 INCOME PER $1000.00 OF LOAN

From the "pie charts" we can readily see that a part of the revenue of the Co-op does not have to be paid out in cash. This extra cash represents the "depreciation reserve" plus the "margin". This cash should be conserved for several important purposes.

1. Required payments on the principal of the loan.
2. Prepayments on the loan.
3. Bonds or other temporary cash investment to be used in case of widespread damage to Co-op property.
4. Bonds or other temporary investments to be used in later years to meet the higher and higher required loan payments.
5. Bonds or other temporary investments to be used for "plant replacement" when the time comes.

The type of bonds or other temporary cash investment should be such that the Co-op is assured of interest revenue equal to, or a little larger than, the 2% interest paid on the loan. Naturally the investment should be such that the money invested will not shrink and the investment should be "liquid" so that the money will be available on short notice in case of emergency.

Since the "depreciation reserve" will eventually equal the loan and since the "depreciation reserve" is a legitimate "expense" item, the following chart has been prepared to show the relationship between interest and depreciation (both expense items) and the required payments on principal. The chart represents $1000.00 of loan and the amounts are computed on the basis of quarterly payments to REA of both principal and interest.



RELATION OF "EXPENSE" ITEMS (INTEREST / DEPRECIATION) TO AMOUNTS PAYABLE TO REA ON LOANS

The foregoing chart is intended to give a quick picture of "debt service" as compared with fiscal "expense" items. It simply shows what we can expect to happen in the future. It also shows that if we store up cash (represented by the difference between "depreciation reserve" and "principal payments") or use this cash to make prepayments on the loan during the early years, we can be assured of being able to meet our loan requirements without being dependent on "margins". This would be especially valuable should the "margins" of REA financed Co-ops become subject to income tax. We seem to be getting closer and closer to income taxes.

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All of the preceding discussion has been for the purpose of showing the necessity for the establishment of a long term financial policy or plan. Without a plan and a fixed purpose the Co-ops can easily drift into financial difficulties. The best approach to a long term plan is through the formation of a Budget.

WHAT IS A BUDGET?

It is nothing more nor less than the statement of a financial objective you are striving to reach. It can be a carefully thought out plan for the month, or year, or a term of years, or it can be haphazard assembling of figures to meet the request of REA that a budget be prepared each year for its approval. A budget is in fact a working tool for management. It will be a good tool for management. It will be a good tool or a bad one in direct proportion to the thinking and planning that goes into it.

The items to be considered in a budget are two fold. Revenue and expenses. Can we expect enough revenue to pay all cash expenses and set up the necessary cash reserves? Can we cut expenses and still give adequate service to Co-op members? Only careful study will tell whether cutting expenses is justified or if it will be necessary to increase revenue, or both.

Budget amounts can usually be based on past experience, weighted with anticipated changes for the future. Practically every Co-op has records (or can set them up) on which quite accurate predictions can be based. The setting up of these figures should be left to the manager and other Co-op employees, but they should reflect the overall long time policy established by the Board of Directors.

It is well to remember that about the only expense items of the Co-op which are subject to control are those falling in the general category of "Operating Expense". "Interest" and "Depreciation" are practically fixed. Nothing much can be done about the cost of "Purchased Power". On the other hand, revenue can be controlled by two general methods; sell more KWH or raise the retail rates. With the cost of service steadily increasing it may be necessary to increase rates; Many Co-ops have already done so with beneficial results.

With ten or twelve years of operating experience behind them, a great many Distribution Co-ops have been able to set up a good long time fiscal policy. We can all benefit from the experience of others and a free interchange of information. There are certain general patterns which can be followed, however.

I Set up a long term fiscal policy. It will take some real thinking to get a good one.

II Secure from REA a complete debt service statement. This will give you the amount of interest and principal due each year until your present loans are fully paid.

III Calculate the amount of cash you will need for "plant replacement" purposes over the years.

IV Accurately estimate the "depreciation reserves" which will have to be set up each year, and the cash available from this source for principal payments.

V Accurately forecast your Operating Expenses and Cost of Purchased Power.

VI Check the above against your anticipated revenue to see that there will be sufficient total cash to meet all of your obligations.

VII Make your budget to meet your plan and then make the necessary effort to make the budget work.

There is no substitute for seriously looking ahead. The farther into the future you can plan ahead, the fewer chances there will be of having to face a financial crisis at some unexpected time. The 10 year financial forecasts which most Co-ops have made are fine. One fault is that they do not look quite far enough ahead. We all need to know more about what is going to happen during the later years of our loan repayment program.

When everything is said and done the Board of Directors, Managers and other Co-op personnel are working for the members. Are the members getting value for a fair share of the dollars they pay for service? Will you keep the member in mind when your financial plans are made? The Co-op program calls for service to the member at cost. That means all of the cost of course; you would be doing a disservice to the members if your financial plans did not include all of the costs. It does no credit to a Board of Directors or a Manager, however, to overcharge members through higher rates than are necessary just so that the annual financial statement looks good. To do so is to fail in a part of the trust which the members have placed in us.